

## NEW ESTER COMPOUND, HIGH POLYMER COMPOUND, RESIST MATERIAL AND PATTERN-FORMING METHOD

**Patent number:** JP2000336121  
**Publication date:** 2000-12-05  
**Inventor:** KANOU TAKESHI; NISHI TSUNEHIRO; KURIHARA HIDESHI; HASEGAWA KOJI; WATANABE TAKESHI; WATANABE OSAMU; NAKAJIMA MUTSUO; TAKEDA TAKANOBU; HATAKEYAMA JUN  
**Applicant:** SHIN ETSU CHEM CO LTD  
**Classification:**  
- **international:** C08F20/10; C07C69/533; C07C69/593; C08F22/10; G03F7/033; G03F7/039; H01L21/027  
- **european:**  
**Application number:** JP19990307148 19991028  
**Priority number(s):**

[Report a data error here](#)

### Abstract of JP2000336121

**PROBLEM TO BE SOLVED:** To provide a new ester compound easily decomposable with an acid, useful as a raw material for a polymer compound realizing the sensitivity, resolution and etching resistance highly exceeding those of conventional product and effective as a resist material.

**SOLUTION:** The objective compound is expressed by formula I (R1 is H, methyl, CH<sub>2</sub>CO<sub>2</sub>R<sub>14</sub> or the like; R<sub>2</sub> is H, methyl or CO<sub>2</sub>R<sub>14</sub>; R<sub>3</sub> is a 1-8C alkyl or a 6-20C aryl; R<sub>4</sub> to R<sub>13</sub> are each H, a univalent hydrocarbon group or the like; R<sub>14</sub> is a 1-15C alkyl), e.g. the compound of formula II. The objective compound can be produced by carrying out the nucleophilic addition reaction to the carbonyl group of bicyclo[2.2.1]heptan-2-one and its derivative by Grignard reaction, etc., to obtain an endo-type alcohol, subjecting the endo-type alcohol to a substitution reaction with an acid accompanying the inversion of steric structure and further carrying out the procedure of an alkali hydrolysis to form an exo-type alcohol, etc.

---

Data supplied from the **esp@cenet** database - Patent Abstracts of Japan